| 1 | 1. A m | ethod of using a smart card, comprising: | |
|---------------|---------------|--|--|
| 2 | issu | ing a smart card to a user; | |
| 3 | issu | ing manual authentication information to the user; | |
| 4 | auth | nenticating the user and the smart card using the manual authentication | |
| 5 | information | ı; ⁻ | |
| 6 | obta | aining a public key from the smart card; and | |
| 7 | issu | ing a digital certificate using the public key to the smart card to activate | |
| 8 | the smart o | ard. | |
| 9 | | | |
| 10 | 2. The | method according to claim 1, wherein the manual authentication | |
| 1 | information | n comprises a user ID and a password. | |
| 12 | | | |
| 13 | 3. The | method according to claim 1, further comprising obtaining the digital | |
| 13 14 | certificate f | certificate from a certificate authority. | |
| 4 5 | | | |
| 1 6 | 4. The | method according to claim 1, wherein the authenticating further | |
| 17 | comprises | connecting the smart card to a workstation. | |
| 7 28 29 | | | |
| 1 9 | 5. The | method according to claim 1, further comprising storing the digital | |
| 20 | certificate i | in at least one of the smart card and a workstation. | |
| 21 | | | |
| 22 | 6. The | method according to claim 1, further comprising: | |
| 23 | conr | necting the smart card to a workstation; | |
| 24 | initia | ating a login request to a server; | |
| 25 | auth | nenticating the smart card using the digital certificate; and | |
| 26 | if au | thenticated, permitting a login to a computer resource. | |
| 27 | | | |
| 28 | 7. The | method according to claim 6, wherein the authenticating further | |
| 29 | comprises | connecting the smart card to a workstation, and removing the smart | |
| 30 | card from t | he workstation after the authenticating. | |

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8. The method according to claim 6, wherein the authenticating further comprises determining that the digital certificate has not been revoked.

| 1 | | 9. | A method of using a smart card, comprising: |
|-------------------------|-----|---------|---|
| 2 | | | receiving a smart card; |
| 3 | | | receiving manual authentication information; |
| 4 | . • | | authenticating the smart card using the manual authentication information; |
| 5 | | | generating a public key using the smart card; |
| 6 | | | sending the public key to an administration server; and |
| 7 | | | receiving a digital certificate generated using the public key to activate the |
| 8 | | smart | t card. |
| 9 | | | |
| 10 | | 10. | The method according to claim 9, wherein the manual authentication |
| <u>4</u> 1 | | inform | nation comprises a user ID and a password. |
| 12 | | | |
| 1 3 | | 11. | The method according to claim 9, further comprising receiving the digital |
| 1 3 | | certifi | icate from a certificate authority. |
| 1 5 | | | |
| 16 | | 12. | The method according to claim 9, wherein the authenticating further |
| 7 7 | | comp | rises connecting the smart card to a workstation. |
| -16 -7 -78 -19 | | | |
| ₫9 | | 13. | The method according to claim 9, further comprising storing the digital |
| 20 | | certifi | icate in at least one of the smart card and a workstation. |
| 21 | | | |
| 22 | | 14. | The method according to claim 9, further comprising: |
| 23 | | | connecting the smart card to a workstation; |
| 24 | | | sending a login request to a server; |
| 25 | | | authenticating the digital certificate against a certificate revocation list; and |
| 26 | | | if authenticated, permitting a login to a computer resource. |
| 27 | | | |
| 28 | | 15. | The method according to claim 14, wherein the authenticating further |
| 29 | | comp | rises connecting the smart card to a workstation, and removing the smart |
| 30 | | card t | from the workstation after sending the digital certificate. |
| | | | |

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16. The method according to claim 9, wherein the authenticating further comprises determining that the digital certificate has not been revoked.

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| - 1 | 17. | A method of using a smart card, comprising: |
|----------------------|--------|--|
| 2 | | connecting the smart card to a workstation; |
| . 3 | | sending a login request to a server; |
| 4 | | authenticating a digital certificate for the smart card; and |
| 5 | | if authenticated, permitting a login to a computer resource. |
| 6 | | |
| 7 | 18. | The method according to claim 17, wherein the digital certificate is obtained |
| 8 | by ob | otaining a public key from the smart card, and receiving the digital certificate |
| 9 | from | a certificate authority. |
| 10 | | |
| 1 1 | 19. | The method according to claim 17, further comprising obtaining the digital |
| 2 | certif | icate from a certificate authority. |
| 3 3 | | |
| 14 | 20. | The method according to claim 17, wherein the authenticating further |
| 第2 第3 第4 第5 | comp | orises connecting the smart card to a workstation, and the removing the smart |
| 16 | card · | from the workstation after authenticating. |
| 1 7 | | |
| 7 8 19 | 21. | The method according to claim 17, further comprising storing the digital |
| <u>=</u> 19 | certif | icate in at least one of the smart card and a workstation. |
| 20 | | |
| 21 | 22. | The method according to claim 17, wherein the authenticating further |
| 22 | comp | orises determining that the digital certificate has not been revoked. |

| 1 | 23. | A method of using a smart card, comprising: | | |
|-------------------------|---|---|--|--|
| 2 | | issuing a smart card to a user; | | |
| 3 | | issuing manual authentication information to the user, the manual | | |
| 4 | authe | authentication information comprising a user ID and a password; | | |
| 5 | | on first use of the smart card: | | |
| 6 | | connecting the smart card to a workstation; | | |
| 7 | | authenticating the user and the smart card using the manual | | |
| 8 | | authentication information; | | |
| 9 | | obtaining a public key from the smart card; and | | |
| 0 | | sending a digital certificate generated using the public key from a | | |
| 1 | certificate authority to the smart card to activate the smart card. | | | |
| | on a subsequent use of the smart card: | | | |
| | | connecting the smart card to a workstation; | | |
| 71 4 | | sending a login request to a server; | | |
| 5 | | authenticating the digital certificate against a certificate revocation list | | |
| 16 | | to determine that the digital certificate has not been revoked; and | | |
| 17 | | if authenticated, permitting a login to a computer resource. | | |
| 1 2 8 14 15 16 17 18 19 | | | | |
| 19 | 24. | The method according to claim 23, wherein the authenticating further | | |
| <u></u> | comp | comprises connecting the smart card to a workstation, and the removing the smar | | |
| 21 | card from the workstation after authenticating. | | | |
| 22 | | | | |
| 23 | 25. | The method according to claim 23, further comprising storing the digital | | |
| 24 | certificate in at least one of the smart card and a workstation. | | | |
| | | | | |

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